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February 6, 2014

Jerry Lein, Staff Engineer
North Dakota Public Service Commission
600 E. Boulevard, Department 408
Bismarck, ND 58505-0480

RE: *In the matter of the Siting Application of Sequoia Energy US Inc. for the 150 MW Border Winds Energy Project, Rolette County, North Dakota Case No. PU-08-797.*
Supplemental information for Petition for Modification or Amendment

Dear Mr. Lein:

Border Winds Energy, LLC ("BWE") respectfully submits the following supplemental details pertaining to the 150 MW Border Winds Energy Project in Rolette County, North Dakota ("Project"). Since the Commission approved the Order, BWE has pursued a rigorous micrositing process to reduce impacts from the Project. This has included intensive work to avoid wetland impacts and potential aviation concerns at the Rolla Airport by adjusting or removing some turbine locations. We are using minimization techniques such as directional boring to avoid impacts to wetland impacts from underground cabling. We have also worked closely with landowners over the past year to address their concerns pertaining to the placement of turbines and other Project facilities on their property. We have received exceptional support from the local community to make this project a reality, including unanimous support from the Rolette County Planning Committee and Board of Commissioners during a public hearing on November 19, 2013 which included a review of the Vestas turbine layout.

The information below is provided in response to your information request received on January 21, 2014.

- 1. For the Shadow and Noise studies can you please provide a table showing the following for each receptor point**
 - a. The label assigned to it in the original permit noise and shadow analysis**
 - b. A description of what type of receptor it is such as occupied residential, dwelling, barn, etc.**
 - c. If occupied resident, whether resident or landlord is a project participant.**

BWE completed sound and shadow flicker modeling for the proposed Vestas turbine in 2013. The modeling reports for the Vestas turbine layout were included with the Petition. Included with this letter as **Attachment 1** is a table that has been compiled to compare the shadow flicker modeling results from the 2010 modeling completed by Sequoia Energy, and the 2013 modeling completed by BWE. The table includes the receptor labels from both the 2010 and 2013 modeling. All the receptors included in the modeling represent occupied residences, and the table identifies if the owner of the residence is a participating landowner in the project.

It is not possible for BWE to compare the Vestas turbine layout noise modeling to the original layout because noise modeling was not conducted in 2010 for the Siemens turbine layout that was reviewed and approved by the Public Service Commission (“Commission”) in the original Certificate of Site Compatibility (“Certificate”). However, a comparison can be made between the Siemens 2.3 MW turbine that was originally permitted, and the Vestas 2.0 MW turbine. As stated in the original *Border Winds Application for Certificate of Site Compatibility*, the Siemens 2.3 MW turbine results in a mean A-weighted sound power level of 107 dBA located on an 80 meter hub. The Vestas 2.0 MW turbine proposed for the final layout results in a mean A-weighted sound power level of 105 dBA which will be constructed on a 95 meter hub. The 2013 noise modeling report confirms that the Vestas turbine layout will not exceed the 50 dBA setback specified in the ND Admin. Code section 69-06-08-01. It is important to note that when comparing the two turbines to a common receptor the Vestas turbine is 2 decibels quieter at the hub and with a taller tower, further reducing the noise level at a given receptor.

2. A list of permits or permit modifications including SHPO concurrence and USACE that have not yet been filed with the Commission and the status of each.

BWE has continued to develop the Project since the Commission approved the Certificate in 2010. BWE has secured a number of additional permits or approvals for the Vestas turbine layout that is now planned for the Project. These permits and approvals include:

- 1) BWE has already received approval of the revised wind turbine generator and turbine layout from the Rolette County Planning Committee and Board of Commissioners. The Rolette County Conditional Use Permit and Building Permit for the Project were issued on November 19, 2013 based on the revised wind turbine generator and turbine layout.
- 2) BWE contracted with Westwood Professional Services to update the previously completed *Class III Cultural Resources Inventory*. A Supplemental Class III report was completed which states that no additional resources were identified and no further work is recommended. The report found no previously unrecorded archaeological sites or historic structures in the Project area. The report concluded that the Project may proceed and that no further work is necessary. The Supplemental report was submitted to the North Dakota SHPO in December 2013, and a letter was received from the SHPO on January 14, 2014 concurring with the conclusions of the report. The SHPO letter is included with this letter as **Attachment 2**.
- 3) As indicated in the original Petition, wetland impacts associated with the Project were originally coordinated with the U.S. Army Corps of Engineers (Corps) in 2010. At that time, the layout of the Project involved enough wetland impact to require permits from the Corps, and compensatory mitigation of wetlands through construction of new wetlands within the Project area. Since that time, the Project team redesigned the Project layout to significantly reduce overall wetland impacts from the Project. A Wetlands Report and Wetland Impact Summary Memo were submitted to the Corps on December 30, 2013, which documents that the Project impacts to wetlands will not require mitigation. The remaining minor wetland impacts are related to construction of the access roads and temporary impacts from underground cable installation and turning radius improvements. Permanent wetland impacts have been avoided

wherever possible through the use of directional boring for underground cable and by rerouting access roads and haul route approaches to avoid wetlands. Not turbines will be placed in wetlands. A letter confirming Jurisdictional Determination and concurrence with the Wetland Report and Impact Memo is forthcoming from the Corps and will be provided to the Commission when it is received.

- 4) A number of other construction-related permits will be required prior to initiating construction of the Project. BWE will continue to work in conjunction with all local, state, and federal agencies to obtain these necessary permits and approvals prior to constructing the Project. Included with this letter as **Attachment 3** is a list identifying these permits and approvals and their current status. Further documentation of these permits and approvals will be filed with the Commission when they are received.

3. An analysis of whether any exclusion or avoidance areas under the Commission's NEW rules in ND Admin. Code section 69-06-08-01 will be affected.

a. If not, then file a certification under N.D.C.C. section 49-22-03(3)(a)(3) that the activities will not affect any known exclusion or avoidance area and the utility will comply with all applicable conditions and protections in siting laws and rules and commission orders previously issued for any part of the facility.

b. If avoidance areas are affected then follow the procedures under N.D.C.C. section 49-22-03(3)(b)

<http://www.legis.nd.gov/cencode/t49c22.pdf?20140116155916>

BWE has analyzed the Project using the Commission's exclusion and avoidance areas in ND Admin. Code Section 69-06-08-01, as amended April 1, 2013. BWE's analysis determined, and BWE certifies, that the project avoids all exclusion and avoidance areas except as provided in and approved by the Commission's Findings of Fact, Conclusions of Law and Order of May 5, 2011 issuing the Certificate (the "Order"). Please see the attached Certification under N.D.C.C Section 49-22-03(3)(a)(3) (**Attachment 4**). Impacts of the Vestas turbine layout are consistent with or less significant than those already considered by the public during public hearings in Rolla, North Dakota on November 3, 2009 and again on January 24, 2011. The impacts of the Vestas turbine layout are also consistent with or less significant than those already reviewed and approved in the Order. BWE's analysis and findings with respect to impacts to exclusion and avoidance areas is detailed in the Exclusion and Avoidance Area Matrix (**Attachment 5**).

4. A comparison of the Alternate Turbine Locations that were included in the Order in 2010 and the Alternate Turbine Locations included in the Vestas turbine layout.

As depicted in the Figure that was included with the January 8, 2014 *Petition for Modification or Amendment*, BWE originally identified 66 turbine locations and ten alternate turbine locations that were included in the Order. Of the 66 original turbine locations, 62 locations have been preserved in the Vestas turbine layout and four locations were removed from the original layout that was approved by the commission as a measure to further increase the buffer from the Rolla

Airport have been removed due to siting constraints (original turbines M1, J3, J4, and J5). These turbine locations were removed from the Vestas layout to further set back from the Rolla Airport.

Of the original ten alternate turbine locations, four have been retained as alternates in the Vestas turbine layout. Five of the original alternate turbine locations were removed from the original layout that was approved by the commission as a measure to further increase the buffer from the Rolla Airport (ALT-S5, ALT-N1 – ALT-N4). One original alternate turbine location (previously ALT-B8) is now a proposed Vestas turbine location (T11).

Twelve new turbine locations (A1 – A5, T21, T42, T53, T59, T64, T68, and T78) and one alternate turbine location (T2) were added to the Vestas turbine layout for a total of 75 proposed Vestas turbine locations and five alternate Vestas locations. Generally, these new turbine locations have been added to previously reviewed strings of turbines to maintain a compact layout and to avoid additional project impacts. All proposed and alternate turbine locations are located entirely within the Project boundary previously considered by the Commission and approved in the Order.

Finally, BWE has received exceptional support from the local community to move forward with this Vestas turbine layout. That support was reflected during the public hearing that was held in Rolla on November 19, 2013 by the Rolette County Planning Committee and Board of Commissioners. That hearing included a review of the new Vestas turbine and the details of the revised turbine layout. That public hearing results in unanimous approval of the Project through the Conditional Use Permit and Building Permit process from Rolette County. Throughout the development cycle going back to early development in 2008 this Project has enjoyed a wealth of community support without a single public display of opposition. BWE believes strongly that the Project should move forward with the Vestas turbine layout and we look forward to working closing with the Commission to make that a reality.

Please feel free to contact me directly with any additional questions or concerns.

Sincerely,



Sean Flannery
Senior Permitting Specialist
RES Americas

CC: Brad Lila, Project Manager—RES Americas

Enclosed:

Attachment 1 – Table of 2010 and 2013 Shadow Flicker Modeling Results

Attachment 2 – SHPO Concurrence Letter – January 14, 2014

Attachment 3 – Permitting Matrix, Border Winds Energy Project

Attachment 4 - Certification under N.D.C.C Section 49-22-03(3)(a)(3)

Attachment 5 - Exclusion and Avoidance Area Matrix